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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,144	01/20/2004	Martin Czech	Micronas.7397	1555

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EXAMINER
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TRAN, TAN N

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/761,144

Applicant(s)

CZECH ET AL.

Examiner

TAN N. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

*Minhloan Tran*  
**Minhloan Tran**  
**Primary Examiner**  
**Art Unit 2826**

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Drawings**

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the resistance is the intrinsic resistance of the substrate between the base and a contact-doping zone metallicity connected to the collector or emitter as recited in claim 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### **Information Disclosure Statement**

2. If applicant is aware of any relevant prior art, he/she requested to cite it on form PTO-1449 in accordance with the guidelines set forth in M.P.E.P. 609.

### **Specification**

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### **Claim Rejections - 35 USC § 112**

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 9,10, "the collector and emitter of which are connected directly to one of these potentials" is unclear as to whether it is being referred to each of the collector and emitter of which is connected directly to one of these potentials or the collector and emitter of which are connected directly to these potentials.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant prior Art (APA) in view of Scaccianoce (5,949,122).

With regard to claim 1, APA discloses integrated circuit including at least two circuit components (1,2), which are formed on a semiconductor substrate of the first conductivity type and which each have a self-contained supply voltage system, and including at least one coupling circuit 4 which connects the same potentials (Vss1, Vss2; Vcc1, Vcc2) of the two supply voltage systems so as to intercept voltage spikes; the coupling circuit 4 includes at least one transistor 6

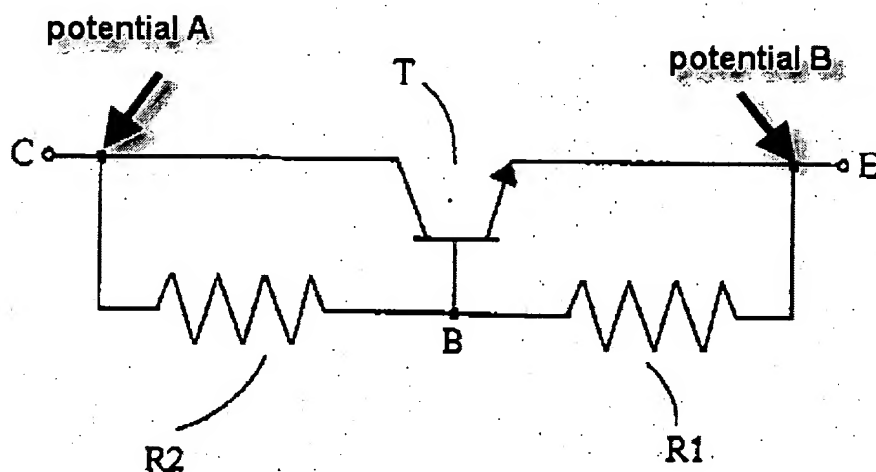
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with a base of the first conductivity type, and a collector and emitter of a second conductivity type. (Note lines 16,17, page 3 of the Background of the invention, fig. 1 of APA).

APA does not disclose the base of transistor is connected through a resistance to the potentials, and the collector and emitter of transistor are connected directly to one of the potentials.

However, Scaccianoce discloses the base (B) of transistor (T) is connected through a resistance (R1,R2) to the potentials (A,B), and the collector and emitter of transistor are connected directly to one of the potentials (A,B). (Note see fig below, and fig. 1 of Scaccianoce).

Therefore, it would have been obvious to one of ordinary skill in the art to form the APA's device having the base of transistor is connected through a resistance to the potentials, and the collector and emitter of transistor are connected directly to one of the potentials such as taught by Scaccianoce in order to reduce voltage drop between the terminals.



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Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant prior Art (APA) in view of Scaccianoce (5,949,122) and further in view of Avery et al. (6,791,122).

With regard to claim 2, APA and Scaccianoce do not disclose the resistance is the intrinsic resistance of the substrate between the base and a contact-doping zone metallicity connected to the collector or emitter.

However, Avery et al. discloses the resistance RB1 is the intrinsic resistance of the substrate 103 between the base of transistor T1 and a contact-doping zone 114 metallicity connected to the collector or emitter of transistor T1. (Note fig. 1B of Avery et al.).

Therefore, it would have been obvious to one of ordinary skill in the art to form the APA and Scaccianoce's device having the resistance is the intrinsic resistance of the substrate between the base and a contact-doping zone metallicity connected to the collector or emitter such as taught by Avery et al. in order to reduce the damage of the semiconductor device.

With regard to claim 3, Scaccianoce discloses the collector and emitter of the transistor T are symmetrical. (Note fig. 1 of Scaccianoce).

With regard to claim 4, Scaccianoce discloses the coupling circuit includes a plurality of transistors (T1 to Tn) connected in parallel between the power supply potentials. (Note fig. 2 of Scaccianoce).

With regard to claim 5, APA, Scaccianoce and Avery et al. disclose all the claimed subject matter except for the transistors comprise a plurality of doping zones of the second conductivity type wherein the doping zones are alternately connected to the first or second of the two power supply potentials. However, it would have been obvious to one of ordinary skill in the

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art to form the transistors comprise a plurality of doping zones of the second conductivity type wherein the doping zones are alternately connected to the first or second of the two power supply potentials in order to supply power for the semiconductor device. Note, fig. 7 of Ker et al. (6,744,107), are cited to support for the well-known position.

*Allowable Subject Matter*

6. Claims 6-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 6-17 are allowable over the prior art of record, because none of these references disclose or can be combined to yield the claimed invention such as the doping zones are arranged in an equidistant configuration as recited in claim 6.

**Conclusion**

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tan Tran whose telephone number is (571) 272-1923. The examiner can normally be reached on M-F 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone numbers for the

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organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

TT

Mar 2006